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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/590,373	12/27/2006	Sergey Evgenievich Mikhailov	MIKHAILOV EL AL-1 PCT	8392
25889	7590	11/05/2008	EXAMINER	
COLLARD & ROE, P.C. 1077 NORTHERN BOULEVARD ROSLYN, NY 11576			PURINTON, BROOKE J	
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/590,373	Applicant(s) MIKHAILOV ET AL.	
	Examiner Brooke Purinton	Art Unit 2881	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 8/23/2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 23 August 2006 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>8/23/2006</u> . | 6) <input type="checkbox"/> Other: _____ |

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DETAILED ACTION***Specification***

Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

The abstract of the disclosure is objected to because it is more than 150 words in length and uses the phrase "evolutes of **said** surfaces," in lines 14-15. Correction is required. See MPEP § 608.01(b).

Drawings

The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the "evolutes of which are closed curves which limit the convex transverse sections of the lamp and conventional absorber," and "the convex transverse section of the lamp" and the "transverse section of the conventional absorber" must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference character(s) not mentioned in the description: G,H in Figure 3, α_{np} and α_{omp} in Figure 1-4.

Figure 1 and 3 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g).

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a

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drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 1 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The term "the evolutes of which are closed curves which limit the convex transverse sections of the lamp and conventional absorber" in claim 1 is a relative term which renders the claim indefinite. The terms "evolutes of which" and "convex transverse section" are not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention. Additionally the term "generated by moving a straight line parallel to the solarium body axis lengthwise" is not clearly understood, since a straight line is not clearly set out as parallel to the solarium body (which is a cylinder) and moving it lengthwise would mean creating a straight line that does not create the form shown in Figure 6. Examiner will examine this as best understood.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 1 is rejected under 35 U.S.C. 103(a) as being unpatentable over Levin (USPN 4103175) in view of Maruyama (JP 05088086, using machine translation attached) and Basso (USPN 4674507).

Regarding Claim 1, Levin teaches a device for UV-irradiating of human's cutaneous covering (Col 1, lines 5-10), i.e., a vertical solarium comprising a cylinder- shaped body closed along the perimeter thereof accommodating 'n' fluorescent lamps for taking sunless tan (Figure 2, Col 2, line 23 "fluorescent lamps," where n would be the number of lamps Levin discloses, and perimeter being closed as shown in figure 6 and discussed by irradiation need to "receive radiant power through 2π steradians, i.e. from all directions within a hemispherical zone," Col 3, lines 46-50), said lamps being spaced apart at an equal angular pitch round an axis which is at the same time the solarium's axis, and being arranged parallel thereto (Figure 1, lamps 14 are parallel to each other).

Levin fails to teach the solarium being provided with a door, the solarium being used for tanning (he discloses it being used for medical purposes (1, 1-31)) and the lamps being placed equidistantly therewith (he discloses a gap for a viewing portal (4, 55-60)).

Basso teaches a tanning solarium with a cylinder shaped body provided with a door (Figure 1, part 12), the solarium being used for tanning (1, 5-6), and the lamps being placed equidistantly therewith (Figure 2, lamp sets 16, 17 being placed equidistantly).

It would have been obvious to one of ordinary skill at the time of the invention to have a door, because it is well known in the art that that would allow a user easy access to the irradiation area. It would have additionally been obvious to use the solarium for tanning, because that is a commonly known thing to use UV light for. Lastly, placing the lamps equidistantly (i. e. without a viewing portal as disclosed in Levin) would have been obvious if the user needed a more even tan, or did not need supervision or to remain within visual contact. Furthermore, the use of more modern technology - including smaller and less expensive cameras - would allow a modern day inventor to modify the apparatus of Levin to have equidistant lamps and still be able to observe the patient undergoing treatment.

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The combination of Levin and Basso fail to teach that said device further comprises a cylinder-shaped mirror reflector which is coaxial with the solarium body and is interposed between the lamps and said body and that the reflector is comprised of $2n$ alternating areas (integrated into a cylinder) of first-type and second-type involute cylinder-shaped surfaces the evolutes of which are closed curves which limit the convex transverse sections of the lamp and conventional absorber, respectively, each area of the first-type surface is disposed immediately behind each lamp and appears as a portion of an involute cylinder-shaped surface generated by moving a straight line parallel to the solarium body axis lengthwise the involute of a closed curve which limits the convex transverse section of the lamp, and each area of the second-type surface is disposed between the lamps and is a portion of an involute cylinder-shaped surface generated by moving a straight line parallel to the solarium body axis lengthwise the involute of a closed curve which limits the transverse section of the conventional absorber.

Maruyama teaches a device comprises a cylinder-shaped mirror reflector interposed between the lamps and said body (Figure 7, part 35, 45, 55 are fluorescent lamps and 31, 41, 51 are involute form reflector plates) characterized in that the reflector is comprised of $2n$ alternating areas of first-type and second-type involute cylinder-shaped surfaces the evolutes of which are closed curves which limit the convex transverse sections of the lamp and conventional absorber, respectively (Figure 7), each area of the first-type surface is disposed immediately behind each lamp and appears as a portion of an involute cylinder-shaped surface (Figure 7, first type surface being that behind lamps 35, 45, 55) generated by moving a straight line parallel to the solarium body axis lengthwise the involute of a closed curve which limits the convex transverse section of the lamp, and each area of the second-type surface is disposed between the lamps and is a portion of an involute cylinder-shaped surface (Figure 7, area around 61, 62 being the second type surface) generated by moving a straight line parallel to the solarium body axis lengthwise the involute of a closed curve which limits the transverse section of the conventional absorber.

It would have been obvious to one of ordinary skill in the art to use the reflector arrangement of Maruyama in the apparatus of Levin and Basso since Levin discloses that he tried putting reflectors in the apparatus but “the irradiance provided within the chamber has a strong component of multiply reflected radiant flux across the chamber. Consequently, the irradiance will be a function of the patients body size

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and location," (3-4, lines 65-3), basically, the flux incident on the patient is not uniform. Maruyama teaches that the arrangement of fluorescent lights being backed by the reflector shown is "an involute form reflector plate with which efficiency also improves sharply and homogeneous radiation is obtained," [0003] to combat problems of radiation efficiency/uniformity of previous reflector designs [0002]. To modify the apparatus of Levin and Basso by the reflector design of Maruyama and put the reflector plates between the lamps and the chamber wall would yield the predictable results of allowing a more uniform radiation to be incident on the patient/absorber as well as a more efficient use of light, and a consequent saving of energy because of the more efficient design.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Dealing with reflectors with involute curves - USPN 4641315, USPN 4327969, USPN 4230095, USPN 41301071, USPN 5335152, USPN 5971571, USPN 7055990,

Dealing with the treatment of absorber with radiation - USPN 4100415, USPN 2631588, USPN 1583420, USPN 4703184, USPN 6402774, USPAPN 2004/0093043

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brooke Purinton whose telephone number is 571.270.5384. The examiner can normally be reached on Monday - Friday 7h30-5h00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Kim can be reached on 571.272.2293. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Brooke Purinton
Examiner
Art Unit 2881
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/ROBERT KIM/

Supervisory Patent Examiner, Art Unit 2881